

Serial No.: 10/735,208

PATENT APPLICATION
Docket No.: NC 84,693

REMARKS

Claims 1-6 and 8-32 are pending in the application. Claims 2-5, 7-13, 22, 23, and 31 have been withdrawn pursuant to a restriction/election of species requirements. Claim 7 has been cancelled by this amendment without prejudice. No claims are presently allowed.

Claim 1 has been amended to cancel the optional limitation that the molar concentration of the moderator being greater than the molar concentration of the monomer.

Claims 6 and 10-14 have been amended to make the wording compliant with the amendment to claim 1. The scope of these claims has not been changed.

No new matter has been added.

Restriction

An election of species was required among the process conditions, either singly or grouped. Applicants affirm the prior oral election of the species of claim 14. Claim 14 was found to be allowable if in independent form. The Examiner also searched the species of claim 6, including claims 1, 6, 14-21, 24-30, and 32.

Applicants traverse the election of species requirement to the extent that not all the groupings of process conditions are mutually exclusive with the species of claim 6, as required by MPEP 806.04(f). Claim 6 recites a process condition, without excluding any other condition. The species of claims 10-13 include the same condition, with and without other conditions. These species are not mutually exclusive of the species of claim 6 and claims 10-13 should also be examined.

Claim Rejections – 35 U.S.C. § 112

Claims 1, 6, 14-18, 27-30, and 32 have been rejected under 35 U.S.C. § 112, first paragraph as being allegedly nonenabled. The Examiner stated that the specification is enabling for a process of making a conductive polymer coating, but not for any coating.

The coating recited in claim 1 (claims 6, 14-18, 27-30, and 32 dependent thereon) is a mixture of a solvent, a monomer, an oxidizing agent, and a moderator. The claim does not recite any polymer as part of the coating. The claim then recites that this mixture is heated to initiate polymerization of the monomer. The product of the heating step is not recited in the claim.

The specification provides enablement for forming this coating, regardless of any

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electrical properties of the coating, in paragraph 0047, which shows an example that the coating may be made by spin-coating.

Claim Rejections – 35 U.S.C. § 102

Claims 1, 6, and 24-30 have been rejected under 35 U.S.C § 102(b) as allegedly anticipated by de Leeuw et al. (*Synth. Met.*, 66, pp. 263-273).

Claim 1, as amended, recites a polymerization process. The first step is forming a coating on a substrate. The coating is a mixture of a solvent, a monomer, an oxidizing agent, and a moderator. The second step is heating the mixture to initiate oxidative polymerization of the monomer. The process comprises one or more process conditions selected from the group consisting of: the solvent having a boiling point in excess of about 120°C; and the total concentration of the monomer, the oxidizing agent, and the moderator being at least about 40% by weight.

de Leeuw discloses a polymerization process using a solution of 3.54 mmol monomer (ethylenedioxythiophene), 8.08 mmol oxidizing agent (iron (III) tris-*p*-toluenesulfonate), and 5.40 mmol moderator (imidazole) in 15.0 g *n*-butanol (solvent). (p. 264, right col.)

In order to make a *prima facie* case of anticipation, the reference must disclose each limitation of the claim. *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053, 814 F.2d 628, 631 (Fed. Cir. 1987); MPEP 2131. Among other deficiencies, the reference does not disclose the limitations in claim 1 that the solvent has a boiling point in excess of about 120°C and/or the total concentration of the monomer, the oxidizing agent, and the moderator being at least about 40% by weight.

de Leeuw was cited by the Examiner to show disclosure of the molar concentration of the moderator being greater than the molar concentration of the monomer. Claim 1 has been amended to cancel this limitation, though it is retained in some dependent claims. de Leeuw does not disclose either condition now recited in claim 1. The total solute concentration in de Leeuw is only about 26% and the boiling point of the solvent is only 117°C.

Claims 6 and 24-30 depend from and contain all the limitations of claim 1 and are asserted to distinguish from the reference at least in the same manner as claim 1.

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Claim Rejections – 35 U.S.C. § 103

Claims 15-21 and 32 have been rejected under 35 U.S.C § 103(a) as being allegedly unpatentable over de Leeuw.

In order to make a *prima facie* case of obviousness, each claim limitation must be disclosed in the references (MPEP 2143.03). Among other deficiencies, none of the references discloses the limitation in claim 1 (claims 15-21 and 32) that that the solvent has a boiling point in excess of about 120°C and/or the total concentration of the monomer, the oxidizing agent, and the moderator being at least about 40% by weight, as explained above. As all the claim limitations are not disclosed in the reference, a *prima facie* case of obviousness has not been made.

In view of the foregoing, it is submitted that the application is now in condition for allowance.

In the event that a fee is required, please charge the fee to Deposit Account No. 50-0281, and in the event that there is a credit due, please credit Deposit Account No. 50-0281.

Respectfully submitted,



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